

CLAIMS

1. A connecting construction for components of a system frame, having
- 5 - frameworks (10) which have frame struts (12) and cross brackets (14) connecting the frame struts (12),
- a sheet steel corner plate (20) which is arranged in each case in the region in which the cross bracket (14) is connected to the frame strut (12) and which has
- 10 a corner recess (22) in the corner region of the region in which the cross bracket (14) is connected to the frame strut (12), by means of which a coupling unit (52) can be connected to the frame strut (12), characterized in that
- 15 - a further recess (24) is provided approximately level with the corner recess (22) and offset inward, and
- a further coupling unit (30) having a first coupling element (32) and a second coupling element
- 20 (34) is provided, it being possible for a frame tube (40) to be connected to the first coupling element (32), and the second coupling element (34) being designed in such a manner that it can be fastened in the further recess (24) of the sheet steel corner plate
- 25 (20) with a positive and/or non-positive fit.

2. The connecting construction as claimed in claim 1, characterized in that
- the second coupling element (34) has a spacer
- 30 profile (36) and a projecting profile (38) arranged on the free end side of the spacer profile (36), it being possible for said projecting profile to be connected or said projecting profile is connected in the further recess (24) of the sheet steel corner plate (20) with a
- 35 positive and/or non-positive fit.

3. The connecting construction as claimed in claim 2, characterized in that

- the projecting profile (38) is designed as a hammer head and the further recess (24) is designed as a slot in such a manner that in order to connect the further coupling unit (30) to the sheet steel corner plate (20), the projecting profile (38) can be introduced into the further recess (24) as far as the stop of the spacer profile (36) and the positive and/or non-positive connection is produced by rotation of the further coupling unit (30) by said rotation causing the hammer head of the projecting profile (38) to engage at least in some areas behind the sheet steel corner plate (20).

4. The connecting construction as claimed in claim 3, characterized in that
- the slot of the further recess (24) is arranged vertically upright.

5. The connecting construction as claimed in claim 3, characterized in that
- the slot of the recess is arranged lying horizontally.

6. The connecting construction as claimed in one or more of the preceding claims, characterized in that
- the further recess (24) is arranged spaced apart from the lower edge of the cross bracket (14).

7. The connecting construction as claimed claims 1 to 3, characterized in that
- the first coupling element (32) of the further coupling unit (30) is designed as a tube half-coupling.

8. The connecting construction as claimed in claims 1 to 3, characterized in that

- the further coupling unit (30) is designed as a single-piece cast part, in particular a metal cast part.

5 9. The connecting construction as claimed claims 1 to 3,
characterized in that
- the length (L) of the projecting profile (38) is selected in such a manner that the clear distance (L2)
10 of a frame tube (40), which is connected parallel to the cross bracket (14) in the first coupling element (32) of the further coupling unit (30), from the sheet steel corner plate (20) is greater than the length (L1) of the maximum projecting length relative to the sheet
15 steel corner plate (20) of a coupling unit (52) arranged in the corner recess (22).

10. The connecting construction as claimed in claims 1 to 3,
20 characterized in that
- a rotation prevention unit is provided which secures the further coupling unit (30) against rotation in a position in which it is connected to the sheet steel corner plate (20).

25 11. The connecting construction as claimed in claims 1 to 3,
characterized in that
- the further recess (24) of the sheet steel corner
30 plate (20) has a cross-sectional deformation (68) pointing out of the plane of the sheet steel corner plate.

12. The connecting construction as claimed in
35 claim 11,
characterized in that
- the cross-sectional deformation (68) is provided encircling the further recess (24).

13. The connecting construction as claimed in claims 1 to 3, characterized in that

- an additional recess (26) is provided below the corner recess (22) of the sheet steel corner plate (20), by means of which an additional coupling unit (54) can be connected or is connected to the frame strut (12).

14. The connecting construction as claimed in claim 13,

characterized in that

- the additional recess (26) on the sheet steel corner plate (20) is formed by a U-shaped recess which is open toward the longitudinal connecting edge of the sheet steel corner plate (20).

15. The connecting construction as claimed in claims 1 to 3,

characterized in that

- a further coupling unit (30) is connected in each case in the further recess (24) to the two sheet steel corner plates (20) of a framework (10), and the coupling units (30) are connected to a continuous frame tube (40).

16. A coupling unit (30) for a frame system, in particular for use in a connecting construction comprising:

- frameworks (10) which have frame struts (12) and cross brackets (14) connecting the frame struts (12),
- a sheet steel corner plate (20) which is arranged in each case in the region in which the cross bracket (14) is connected to the frame strut (12) and which has a corner recess (22) in the corner region of the region in which the cross bracket (14) is connected to the frame strut (12), by means of which a coupling unit (52) can be connected to the frame strut (12),

characterized in that

- a further recess (24) is provided approximately level with the corner recess (22) and offset inward, and

5 - a further coupling unit (30) is provided with a first coupling element (32) and a second coupling element (34), it being possible for a frame tube (40) to be connected to the first coupling element (32), and the second coupling element (34) being designed in such
10 a manner that it can be fastened in the further recess (24) of a sheet steel corner plate (20) with a positive and/or non-positive fit.

17. The coupling unit as claimed in claim 16,
15 characterized in that

- the second coupling element (34) has a spacer profile (36) and a projecting profile (38) arranged on the free end side of the spacer profile (36), it being possible for said projecting profile to be connected
20 into the further recess (24) of the sheet steel corner plate (20) with a positive and/or non-positive fit.

18. The coupling unit as claimed in claim 16 or 17, characterized in that

25 - the projecting profile (38) is designed as a hammer head in such a manner that, in order to connect the further coupling unit (30) to the sheet steel corner plate (20), the projecting profile (38) can be introduced into the further recess (24) as far as the
30 stop of the spacer profile (36) and the positive and/or non-positive connection is produced by rotation of the coupling unit (30) by said rotation causing the hammer head of the projecting profile (38) to engage at least in some areas behind the sheet steel corner plate (20).

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19. The coupling unit as claimed in one or more of claims 16 to 17, characterized in that

- the first coupling element (32) of the further coupling unit (30) is designed as a tube half-coupling.

20. The coupling unit as claimed in one or more of
5 claims 16 to 17,

characterized in that

- the coupling unit (30) is designed as a single-piece cast part.

10 21. The coupling unit as claimed in one or more of claims 16 to 17,

characterized in that

- the length (L) of the connecting profile (38) is selected in such a manner that the clear distance (L2)
15 of a frame tube (40), which is connected parallel to the cross bracket (14) in the first coupling element (32) of the further coupling unit (30), from the sheet steel corner plate (20) is greater than the length (L1) of the maximum projecting length relative to the sheet
20 steel corner plate (20) of a coupling unit (52) arranged in the corner recess (22).

22. A framework (10) for a frame system, suitable for use within a connecting construction for components of
25 a system frame comprising:

- frameworks (10) which have frame struts (12) and cross brackets (14) connecting the frame struts (12),
- a sheet steel corner plate (20) which is arranged in each case in the region in which the cross bracket
30 (14) is connected to the frame strut (12) and which has a corner recess (22) in the corner region of the region in which the cross bracket (14) is connected to the frame strut (12), by means of which a coupling unit (52) can be connected to the frame strut (12),

35 characterized in that

- a further recess (24) is provided approximately level with the corner recess (22) and offset inward,

- said further recess (24) is provided in the sheet steel corner plate (20) and is used as a connection for a further coupling unit (30), and
- a further coupling unit (30) having a first coupling element (32) and a second coupling element (34) is provided, it being possible for a frame tube (40) to be connected to the first coupling element (32), and the second coupling element (34) being designed in such a manner that it can be fastened in the further recess (24) of the sheet steel corner plate (20) with a positive and/or non positive fit.

23. The framework suitable for use within the context of a connecting construction for components of a system frame as claimed in claim 22,
characterized in that

- an additional recess (26) is provided in the sheet steel corner plate (20) below the corner recess (22) of the sheet steel corner plate (20), by means of which an additional coupling unit (54) can be connected to the frame strut (12).